

Patent Abstracts of Japan

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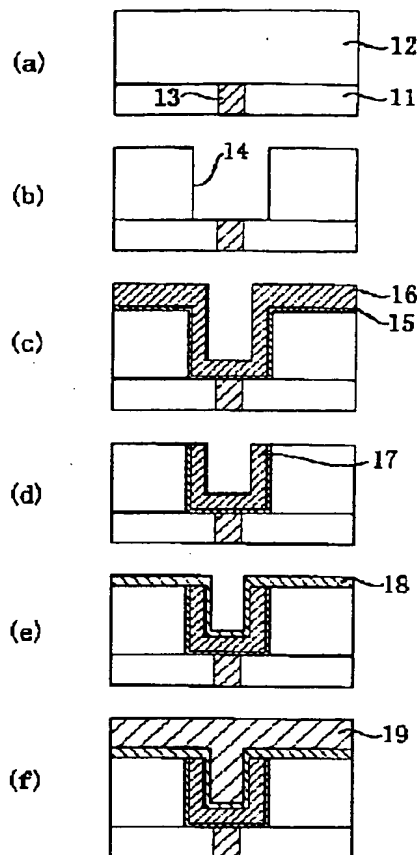
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TITLE : ABRASIVE SLURRY, METHOD FOR  
POLISHING PLATINUM GROUP METAL  
FILM, AND METHOD FOR FORMING  
CELL OF SEMICONDUCTOR  
STORAGE DEVICE



ABSTRACT : PROBLEM TO BE SOLVED: To provide an abrasive slurry, together with a polishing method, for polishing a platinum group metal film by CMP method, and to provide a method for forming a semiconductor storage device cell comprising a lower part electrode of the platinum group metal film.

SOLUTION: On a first inter-layer insulating film 11 where a poly-silicon wiring 13 is provided, a second inter-layer insulating film 12 is deposited. After an opening 14 is formed at the second inter-layer insulating film 12, a TiN/Ti film 15 and a Ru film 16 which is a platinum group metal film are deposited in the opening 14 and on the second interlayer insulating film 12. By performing CMP using an abrasive slurry containing fine particles of oxide of platinum group metal, a lower part electrode 17 comprising the platinum group metal film is formed in the opening part. Then, a  $(\text{Ba}_{0.5}, \text{Sr}_{0.5}) \text{TiO}_3$  film 18 which is to be a capacity insulating film and a Ru film 19 which is an upper part electrode film are deposited. The surface of the platinum group metal film is oxidized through action of an oxide in the abrasive slurry, for easy polishing.

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